Status

No claim has been proposed as added or canceled by this amendment. Independent claims 1 with claims 2-6 depending therefrom, independent claim 7, and independent claim 8 with claims 9-20 depending therefrom will remain for further consideration.

Claims Allowed

The indication by the Examiner in the recent Office Action that claims 8-20 were allowable over the prior art of record is noted with appreciation.

35 U.S.C. § 103

The Examiner rejected claims 1-4 and 7 under 35 U.S.C. § 103 over Rovnyak in view of Holmes et al. The Examiner rejected claims 5 and 6 under 35 U.S.C. § 103 over Rovnyak in view of Holmes et al. and in further view of Applicant's allegedly admitted prior art. This rejection is respectfully traversed.

Regarding Claims 1 through 4 and 7, the examiner states that Holmes et al. (US Patent 3,941,939) discloses "a high pass filter (Fig. 1, reference C2, column 2, lines 44-47) to produce a ring trip detection (i.e. feedback signal)." We respectfully disagree. The structure formed by capacitor C2 and resistor R12 is clearly in parallel with the ring current path through the Zener Diode ZD2 and the optical coupler Q1. This parallel by-pass structure is certainly not, and cannot be, a "high-pass filter". This is obvious from the

Figure 2 of Holmes depicted on the same page just below the quoted Figure 1. The "RING CURRENT" and "THE FILTERED RING CURRENT" have identical frequencies, and as such, can not be generated in any high-pass filtering process. Furthermore, the "THE FILTERED RING CURRENT" signal is generated to be compared with the direct current signal DC2 (in the same Figure) which is by definition an ultimate low frequency (zero frequency) signal.

High-pass filters consisting of capacitors and resistors ("high-pass RC filters") are notoriously well-known. It consists of a capacitor in SERIES with the signal current (i.e. the current flows through the capacitor only) and a resistor ACROSS the filter output terminals (i.e. between the output signal measuring points). This structure is well known and can be found, for example, on pages 35-39 of well-known handbook "The Art of Electronics" by P. Horowitz and W. Hill, Second Edition, published by CAMBRIDGE UNIVERSITY PRESS, Cambridge, 1980, 1989. In Figure 1.52 and Figure 1.57 of "The Art of Electronics" the authors depict high-pass RC filters being formed by capacitors in series and resistors across the signal, and discuss their operation. It is essential for the "high-pass RC filters" that filtered current can only flow through the (relatively small) capacitor which blocks direct current and low frequency components that should not be allowed to by-pass the filter. Consequently, the structure C2-R12 is not and could not be considered a "high-pass filter" to one with ordinary skills in art of electronics. The C2-R12 structure of Holmes is known to the practitioners of electronics as a "SHUNT" or, more generally, as a "by-pass filter". Consequently, it is obvious that the C2-R12 parallel structure of Holmes is not a high-pass filter either by structure or by function.

The Examiner's explanation of the function of the Rovnyak's "RING TRIP LOOP SENSOR 80" depicted in Figure 1 is appreciated. The Examiner clearly states that "the

ring loop detector detects the call subscriber station going off hook and signals this event to the CPU (10) so that the switching process from ringing supply to DC feed supply can be initiated by the CPU." Current application in the paragraph [0026] clearly and unambiguously defines and describes the feedback network 208 : "The feedback network 208 comprises a high pass filter. The high pass filter is designed to pass noise on the output that would fall in the data band frequencies and block the ring frequency, which allows the ring controller 200 to attenuate switching noise in the data band without attenuating the fundamental power-ringing signal. The feedback network 208 senses the output signal 211 and outputs a feedback signal, which is used to modify the control signals to both the ring switch 202 and the battery switch 203 to attenuate any high frequency signals that may interfere with the signals in the data band".

The "RING TRIP LOOP SENSOR 80" as described by the Examiner and the feedback network 208 of the current application can not be corresponding components. The Rovnyiak's "RING TRIP LOOP SENSOR 80" as interpreted by the Examiner lacks the essential filtering function of the network 208 which comprises a high-pass filter. Also, the feedback network 208 continuously "senses the output signal 211 and outputs a feedback signal, which is used to modify the control signals to both the ring switch 202 and the battery switch 203 to attenuate any high frequency signals that may interfere with the signals in the data band while the "RING TRIP LOOP SENSOR 80", according to the Examiner, only detects "off hook" condition and trigger the CPU to initiate the switching process. Consequently, those two devices are not corresponding either in structure or in the resulting functions as described.

Regarding the Examiners rejection of Claims 5 and 6, in addition to the arguments made above, which are fully applicable to the Claims 5 and 6, we state that

the transistors were well-known electronic components at the time of Rovnysk's invention and application filing in 1978. Taking in account the Examiners statement that "the advantages of using transistors in place of relay contacts were well known to one skilled in the art ..." it is telling that Rovnyak, who is obviously skilled in art, never discusses or even mentions the usage of transistors in his invention.

For at least these reasons, claims 1-7 should be allowed over the art of record.